Accelerated radiotherapy prevent local relapse in molecular unfavourable breast cancer?

N. Rodríguez-ibarria, M. Cabezón Pons, M. Lloret, L. García Cabrera, J. Rodríguez-melcón, P. Lara
Hospital de Gran Canaria Dr. Negrin, Oncología Radioterápica, Spain

Introduction. Molecular classification is at present a useful tool to predict clinical outcome in breast cancer. Triple negative and Her-2+ groups had worse survival and reduced local control after radiotherapy in patients treated by conventional fractionation, probably through increased repopulation during the radiotherapy course.
Objective. The aim of the present study is whether accelerated hypofractionation breast irradiation can increase local control in those bad prognosis molecular classified tumours.
Methods and materials. From January 2008 to December 2011, 399 patients with infiltrating breast carcinomas treated with conservatively surgery, were prospectively included. Mean age: 55.2, median: 54 (range 24–88 years old), 72.4% menopausal. DCI (88.7%), cT1 (58.64%), cN0 (76.2%), and RE+ 81.2% and RP+ 87.9%. Her-2/neu+ (19.8%). Four patient groups were defined by receptor status: Group 1: Luminal A 121 (30.3%), Group 2: Luminal B 206 (51.6%), Group 3: Her-2+ 24 (6%), and Group 4: Triple N 48 (12%). 255 patients were initially referred to surgery and 144 received neoadjuvant treatment due to locally advanced disease. All were treated by accelerated hypofractionation on the tumoral bed by a 2.35 Gy/frx scheme. Those with negative margins received 47 Gy in 20 frx, those at moderate risk 58.75 Gy in 25 frx and most of those with higher risk (very close or affected margins) 63.45 Gy in 27 frx. Treatment acceleration allows a planned total treatment time of 28, 35 or 37 days respectively.
Results. After a mean follow-up: 30.85 ± 13.45, median: 31 months (range 6–66) the 4 years ipsilateral tumour control rate was $95.51 \pm 0.02\%$. For those patients initially referred to surgery no differences were found in local control regarding molecular subtypes: 93% vs 92.3%, $p = 0.441$. Patients with locally advanced tumours initially treated with neoadjuvant chemotherapy high risk subtypes did worse (89.4%) than luminal cases (98.2%) $p = 0.054$.
Conclusion. Accelerated hypofractionated radiotherapy seems to be useful though preventing tumour repopulation for bad prognosis molecular subtypes in early tumours. Longer follow-up will be needed to confirm these encouraging results.

http://dx.doi.org/10.1016/j.rpor.2013.03.717

Assessment of nonsentinel node metastases in sentinel node-positive breast cancer

G. Marín González[1], N. Feltes[1], C. Muñoz[2], A. Alvarado-astudillo[1], M. Cambra[1], E. Mur[3]
[1] *Capio-Hospital General de Catalunya, Radiation Oncology Department, Barcelona, Spain*
[2] *Capio-Hospital General de Catalunya, Surgery Department, Spain*
[3] *Institut Oncologic del Vallès, Radiation Oncology Department, Terrassa, Spain*

Introduction. Axillary dissection is the standard treatment in patients with breast cancer and positive sentinel lymph node. According to the literature in 40–70% of the lymphadenectomies, the sentinel node was the only nodal metástasis, implying potential complications due to the intervention. Several groups have developed models to predict the likelihood of non-sentinel node involvement in patients with positive sentinel biopsy.
Objectives. To determine the area under the ROC curve and predictive efficiency of the Memorial Sloan-Kettering Cancer Center, Stanford, Tenon and Cambridge models in patients of The General Hospital of Catalunya.
Methods. We studied retrospectively the performance of the models in 48 patients at our hospital from October 2002 to December 2012, who met the following criteria: invasive primary breast cancer without clinical nodal affection, positive sentinel biopsy and lack of neoadjuvant treatment before sentinel node biopsy or lymph node dissection.
Results. According to the literature, we observed that 62.5% of GC (+) and 76.5% of GC micrometastasis (+) had negative lymphadenectomy. The area under the ROC curve for the MSKCC, Stanford, Tenon and Cambridge models was 0.609 (IC95% 0.449–0.769), 0.642 (IC95% 0.479–0.805), 0.539 (IC95% 0.375–0.703) and 0.560 (IC95% 0.395–0.725) respectively. The cut-off points for higher efficient diagnostic of the MSKCC, Stanford, Cambridge and Tenon models were in a predicted probability of 12.5% (sensitivity 94.4% and specificity 33.3%), 12.2% (sensitivity 94.4% and specificity 23.3%), 16.8% (sensitivity 94.4% and specificity 20%) and Tenon score 2.75 (sensitivity 94.4% and specificity 30%) respectively.
Conclusions. We did not observe any area under the ROC curve greater than 0.70, therefore these models should not be applied to our population. Further research is needed to confirm that the omission of lymphadenectomy is safe and if the optimization of the cut-off points could reduce the false positive results when counseling patients about their risk of additional nodal disease.

http://dx.doi.org/10.1016/j.rpor.2013.03.718

Axillary dissection in the micrometastatic sentinel node in breast cancer?

M. Medina[1], O. Rivas[2], L. López[1], P. Marcos[1], M. Rial[2], P. Hernández[2], V. Muñoz[1], L. Campos[2]
[1] *Hospital do Meixoeiro, Oncología Radioterápica, Spain*
[2] *Hospital do Meixoeiro, Medicina Nuclear, Spain*

One of the most important prognostic indicators in patients with breast cancer is axillary lymph node status. Sentinel lymph node (SLN) biopsy has emerged as a potential alternative to routine axillary dissection in clinically node-negative early breast cancer.

The adjuvant treatments dependent on findings from lumpectomy and SLN specimens. The aim of this study is to determine the prevalence of addiction disease in patient with micrometastatic sentinel node and assess potential predictors factors.
Materials and methods. Retrospective analysis of 1213 patients in the University Hospital of Vigo and Pontevedra with breast cancer in stage T1–T2 selecting those with micrometastases in the sentinel lymph node biopsy (SLNB), between January 2007 and December 2011. Excluding subjects with chemotherapy neoadjuvant, surgery and/or radiotherapy and no migration of the radiotracer.
Results. We revised 1213 SLNB: 254 (20.9%) macrometastases followed by ALND (pN1a1b2), 101 micrometastases (8.32%), 38 (3.1%) isolated cells (pN0 (i+)), 820 (67.6%) negative (pN0(i−)). Micrometastases (101) in SLNB: 25 (24.7%) patients were not performed ALND, of these 13 received radiotherapy axillaries chains. All without relapse of disease and free of side effects from RT. 76 (75.24%) was performed ALND: 11(21%) with macrometastases, 2 (8%) micrometastases. 4 (3%) isolated tumor cells and 63 (68%) non metastases. Mean follow-up 32 months (range 5–59). 76.3% Grades 2–3. Her2 negative 63.3%. Invasive ductal carcinoma and hormone receptor positive majority. Received hormone therapy 92% and chemotherapy 73.6%. 2 patients developed metastases, 4 deaths, 1 per progression.
Conclusion. In our series, the rate of additional axillary disease in patients with micrometastases in SLNB is low. However 14% have disease > 2 mm. A selected subgroup of patients N1mi, could be avoided ALND without deteriorating its forecast. The decision of ALND should be individualized considering multiple factors. We did not find association between additional disease and size, grade, Ki67/Her2 status or histological type.

http://dx.doi.org/10.1016/j.rpor.2013.03.719

Breast cancer hypofractionated radiotherapy: Observational study of toxicity and outcome

J. Pardo[1], A. Mena[1], I. Prieto[2], A. Noé[1], J. Luna[2], J. Vara[2], M. Granados Plaza[3], M. Diaz Herrera[3], A. Pérez[2]
[1] *Hospital Universitari Son Espases, Radiation Oncology, Spain*
[2] *Capio-Fundación Jiménez Díaz, Radiation Oncology, Spain*
[3] *Capio-Radiation Oncology Research Group, Spain*

Objective. Evaluate toxicity, aesthetic result and outcome in the first 294 breast cancer patients (pts) treated with hypofractionated radiotherapy (HFRT) scheme at 2 years of follow up.
Material and methods. Clinical records of 294 breast cancer pts receiving postoperative HPRT after conservative surgery pts had been evaluated. Age: mean 57.26 years (range 30–80). Tumor location: 54.08% (158) of the pts on the right breast and 45.92% (136) on the left. Surgical treatment: lumpectomy + sentinel lymph node technique (181 pts, 61.56%), quandrantectomy + axillary dissection (60 pts, 20.40%), and lumpectomy + axillary dissection (53 pts, 18.04%). Histology: CDI (94.89%). Tumor size: 1.39 cm (range 0.4–5.8). Histological grade: GI 29.25%, G2 40.81% and G3 29.94%. Resection margins: 18 pts (6.12%) with positive margins. Hormone receptors: (−) in 6.46%. HER-2: (−) in 11.22%. Sentinel lymph node: (+) in 1.70%. Isolated axillary nodes: mean 12.5 (range 1–24). Positive 1.02 (range 0–2). Stage: I 70.06%, II 27.55%, and III 2.39%. HFRT schedule: Breast: 40.5 Gy in 15 fractions of 2.7 Gy. Boost: 103 pts (35.03%) received no boost, 191 (64.97%) received 13.5 Gy/5 fr. Adjuvant chemotherapy: 52.38%. Hormone therapy: 58.87%. Follow-up schedule: weekly based during HPRT, 1 month after its completion and, later, every three months.
Results. 77 pts (26.19%) developed radiodermitis. 64 Grade I and 13 Grade II. Mean dose of radiodermitis appearance: 34.92 Gy (range 13.5–46.5). At 6 months, 17 pts (5.78%) had a slight residual hyperpigmentation in the treated area. At 1 year only 5 pts (1.70%) presented it. At 2 years 2 local relapse have occurred and all remaining pts had a normal-looking skin.
Conclusions. Toxicity and local control of HFRT are equivalent to that obtained with conventional fractionation. Besides, HFRT reduces total time of treatment and a decrease in the waiting list is achieved.

http://dx.doi.org/10.1016/j.rpor.2013.03.720

Breast reconstruction with full expander followed by radiotherapy. aesthetic outcomes

A. Díaz Gavela[1], E. del Cerro Peñalver[1], F. Couñago Lorenzo[1], Y. Molina Ramos[2], I. Sanz[3], R. Pérez Carrión[4]
[1] *Hospital Universitario Quirón Madrid, Oncología Radioterápica, Spain*
[2] *Hospital Universitario Quirón Madrid, Radiofísica y Protección Radiológica, Spain*
[3] *Hospital Universitario Quirón Madrid, Cirugía Plástica, Estética y Reparadora, Spain*
[4] *Hospital Universitario Quirón Madrid, Oncología Médica, Spain*

Introduction. If we review literature, radiation-related complication rates seem to be higher among women undergoing expander/implant reconstruction, irrespective of when RT is given in relation to surgery. The late results of the complex tissue changes induced by RT are capsular contracture, impaired skin healing, implant rupture, malpositioning or extrusion. However, not all studies indicate poor cosmetic/aesthetic outcomes or satisfaction in women who undergo immediate reconstruction followed by RT. In general, if there is indication of administering adjuvant radiotherapy, delayed reconstruction is preferred. But in some cases this is impossible, either because the indication for postoperative radiation therapy arises after surgery, either by explicit request of the patient.
Objective. To show our experience in treating patients after breast reconstruction with a breast expander.